

BOLA

BETTER OPERATIONS & LIFE BY ANALYTICS



An IoT enabled, remote monitoring & controlling solution for **Power , Distribution, EMS & Electrical Machines**

MTCTE Certified under TEC

(Mandatory Testing and Certification of Telecommunication Equipment)

Introduction

Patented BOLA is an IIoT-based, cost-effective monitoring solution that tracks & analyzes critical electrical assets like transformers, switchgear & panels using sensors, software & data analytics. It monitors vital parameters such as oil level, oil temperature, winding temperature, LT lug temperature & all electrical parameters, ensuring assets operate safely & reliably. Additionally, it integrates with an Energy Management System (EMS) to monitor energy consumption in factories, helping avoid issues, maintain power factor & extend the life of machines while preventing penalties from utilities. By providing real-time data through a proprietary dashboard & sending automatic alerts for abnormalities, BOLA helps prevent failures, predicts issues before they occur & enables efficient maintenance & operation. This retrofit device can be installed on both new & existing electrical assets.

Physical Parameters

- Oil Temperature
- Winding Temperature
- Oil Level
- Bushing Temperature / Lug Temperature
- OLTC Tap Position Indicator & Counter
- Ambient Temperature & Humidity
- Moisture in Oil

Analytics & Controlling

- Health Index of Transformer
- Comparison between load % of
- Oil Level Transformer, Winding & Oil temperature, Ambient temperature as per IS 1180/2026/6600
- Transformer efficiency Analysis
- Downtime & Uptime Analysis
- Unbalanced load & Voltage Analytics

Protection Relay Status

- OTI Alarm / Trip Status
- WTI Alarm / Trip Status
- MOG Alarm / Trip Status
- Buchholz Alarm / Trip Status
- PRV Trip Status
- OLTC PRV Status

Electrical Parameters

- Basic Parameters (V, I, P.F.)
- Energy Parameters (kWH, kVARH, kVAH)
- Power Parameters (kW, kVA, kVAR)
- Harmonics (up to 31st level)

Comprehensive Asset Monitoring with BOLA An IoT enabled, remote monitoring & controlling solution.



Distribution Transformers



Power Transformers



Inverter Duty Transformers



Hermetically Sealed Transformers



EMS



Switchgears



Low tension Panel(LTP)



Feeder Pillars



Stabilizers

Around 20% of distribution transformers fail every year in India, compared to 2 - 3% in developed countries.

Why do transformers fail?

- ⦿ Insulation Failure
- ⦿ Moisture Ingress
- ⦿ Overloading
- ⦿ Oil Decay
- ⦿ Improper Maintenance
- ⦿ Design & Manufacturing Defects
- ⦿ Lack of Monitoring/Manual Monitoring

Can this be avoided?

The answer is YES, most of these can be avoided with proactive monitoring and analysis from gathered transformer data.

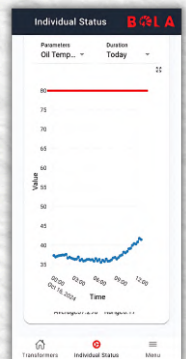
BOLA Dashboard Snapshots



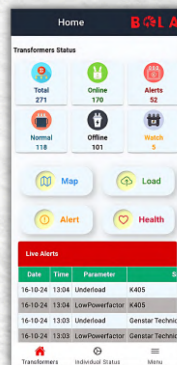
Individual Status



Individual status



Graphical View



All Transformer Status

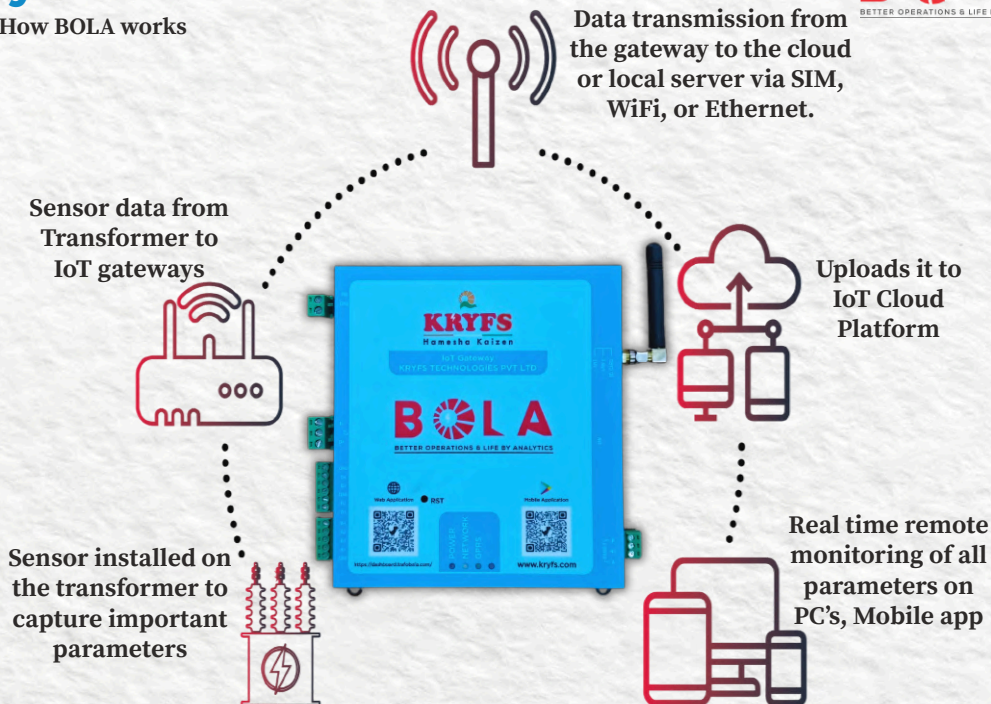
Type Test Conducted

- Radiation Susceptibility Test
- Electrostatic Discharge Test
- Electrical Fast Transient Test
- Surge Immunity Test
- Conducted Emission Test
- Radiated Emission Test
- LTE or LTE-A
- Conducted Susceptibility Test
- Climatic/Environmental Test
- Vibration Endurance Test (Class1)
- Ingress Protection Test
- Fast Ethernet Electrical
- GSM or GPRS or EDGE

System Overview

How BOLA works

BOLA
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Brands who trust us



Conect With Us



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